

<b>Course ID:</b>	<b>Course Title:</b>	<b>Winter 2021</b>
<b>GEO 109 -1</b>	<b>Introduction to Geology</b>	<b>Prerequisite: none</b>
		<b>Credits: 3</b>

Class Information		Instructor Information		Important Dates	
<b>Delivery:</b>	In Class	<b>Instructor:</b>	Dr. Stephen Jeans	<b>First day of classes:</b>	Mon, Jan 11
<b>Days:</b>	Wednesday	<b>Email:</b>	sjeans@ambrose.edu	<b>Last day to add/drop, or change to audit:</b>	Sun, Jan 24
<b>Time:</b>	6:45 p.m. - 9:15 p.m.	<b>Phone:</b>	403-284-3630	<b>Last day to request revised final exam:</b>	Mon, Mar. 8
<b>Room:</b>	A 1085 Airhart Theatre	<b>Office:</b>	by arrangement	<b>Last day to withdraw from course:</b>	Fri, Mar 19
<b>Lab/ Tutorial:</b>	within class time + time TBD April 14	<b>Office Hours:</b>	by appointment	<b>Last day to apply for coursework extension:</b>	Mon, Mar 29
<b>Final Exam:</b>	within class time			<b>Last day of classes:</b>	Fri, Apr 16

### Course Description

This course looks at the composition and structure of the Earth – surface and internal processes, rocks and minerals. This course includes out-of-class tutorials and field trips including a trip to the Royal Tyrrell Museum.

*This course has an existing transfer credit agreement through Alberta Council on Admissions and Transfer. Visit [www.transferalberta.ca](http://www.transferalberta.ca) for details.*

### Expected Learning Outcomes

At the conclusion of the course students will be able to:

- knowledge*
- explain the vast relative scale of geologic time and of the process of rock formation and change,
  - express an understanding of research and thought/theory about geologic and other Earth processes,
  - identify and distinguish among minerals, rock types, and fossil evidence in earth materials,
  - relate knowledge of interior processes of Earth's dynamic crust and implications for surface activity,
  - develop a working knowledge of the geologic time scale and historical planetary rock and life events,
  - explain origins of physical matter and importance of Earth resources available for human consumption,
- skill*
- conduct experiments that model geologic processes to explain stratigraphy and earth movement,
  - observe surficial material and formation to develop testable inferences of type, origin, and structure,

- use calibrated instruments to identify and explain properties of Earth materials and their likely history,
- enact essential research and practices to become a student of science and of geology,

*attitude* - relate a sense of appreciation for the importance of Earth materials regarding human existence, and  
 - express an understanding of the significance and coexistence of science and of faith.

**Textbooks**

Wicander, Reed, and Monroe, James S., (2013). *GEOL2: Student Edition*. Brooks/Cole: Belmont, CA -Cengage. ISBN-13: 978-1-133-10869-6

notes: best suggestion is to acquire a used copy available through the Lions Bookstore at Ambrose University, or there is a newer textbook by same authors, (2021) *Geology: Earth in Perspective 3<sup>rd</sup> edition* purchased online

**Course Schedule**

A tentative schedule is proposed below, and is therefore subject to change, because of learning exercises and opportunities that may take advantage of resources, outdoor activity, and/or guest speakers interjected at the instructor's discretion. Planned for the course are readings and topics in the following order:

<u>Date</u>	<u>Reading</u>	<u>Topic</u>	<u>Note</u> [information for that activity]
01-13	Chapter 01	Science, Belief, and Dynamic Earth	
01-20	Chapter 02 & 03	Tectonics, and Minerals	
01-27	Chapter 04 & 05	Igneous Rock, and Volcanos and Volcanism	
02-03	Chapter 06 & 07	Sedimentary Rock, and Metamorphic Rock	
02-10	Chapter 08 & 09	Quakes and the Interior, Deformation	
02-17		<b>NO CLASS - Family Day and Reading Break</b>	
02-24	Chapter 01 to 09	Fieldtutorial practical, in-class test	
03-03	Chapter 10 & 11	Mass Movement, Stream Processes	<b>Fieldtutorial Journal due</b> by end of day
03-10	Chapter 12 & 13	Groundwater, Glaciation and Glacier Material	
03-17	Chapter 14 & 15	Wind and Desert, Ocean and Shore Processes	
03-24	Chapter 16	Geologic Time and modelling stratigraphy	
03-31	Chapter 17	Earth History and geology virtual fieldtrip	(A.R.C. is a daytime-class-only event)
04-07	Chapter 18	Life History and the Fossil Record	possible outdoor activity, bring jacket
04-14	Chapter 10 to 18	Fieldtutorial practical, in-class test	possible outdoor activity, bring jacket

Final Exam to be discussed in class, schedule will be available through the Office of the Registrar later in the term.

## COVID -19:

Please go to [www.ambrose.edu/covid](http://www.ambrose.edu/covid) for information on the Ambrose University response to the COVID-19 pandemic. Our class will follow that protocol, details of classroom procedures will be reinforced and adapted in-class and posted on Moodle in the document **COVID-19\_Geology.pdf**. Procedures are in place to move this course online should that be required; therefore, students should have access to a computer, the internet, and be prepared for changes as they arise.

## Requirements:

### *Weekly Work*

Each week a topic specific **LAB AND TEXT COURSEWORK** document will be posted on Moodle. It is the responsibility of the student to download and complete any required pre-class activities according to instructions on that document.

The **LAB AND TEXT COURSEWORK** document must be brought to class, electronically on a charged laptop computer **or** as a printed hard-copy, to complete the class-time portion and exit slip. This document must be delivered to the instructor, by email **or** in a marking box (for quarantine of 72 hours), prior to leaving the class. Contact your instructor if there are any issues. Note that exit slips typically consist of five multiple-choice questions answered in about 5 minutes.

### *Fieldtutorial Journal*

A term assignment called **FIELDTUTORIAL JOURNAL** will be demonstrated and discussed in class. This assigned project is due a few weeks prior to the end of the course. Download the **Fieldtutorial Journal .docx** file from Moodle.

This assignment includes several take-home activities and a written, researched, component one page in length. A portion of the assignment is completed in-class with the instructor. That class evening may include an outside observing activity as well, which is planned for the Journal assignment. Details will be provided in class as they become available.

(Note: there is an alternate open-ended assignment to the Fieldtutorial Journal for creative self-starters, please inquire.)

### *Field Study*

When weather permits (e.g., bright, warm evening), in-class work may be taken to the Mahood Commons (Ambrose campus green space) for field work and laboratory experiments. Every attempt will be made to inform students about such opportunities the class before. Watch for an email from your instructor and posting on Moodle for updates about possible outdoor activities before class. It is the responsibility of the student to dress appropriately (mainly for cool-wintery air and cold ground temperatures) and to ensure proper protocols for the safety of themselves and others.

### *Cautions and Student Equipment*

To reinforce concepts encountered during this course, participants will be asked to observe and/or take part in multiple demonstrations and laboratory work that will include the use of equipment. Safety is an expectation of each student for themselves, for the well-being of others in the class, and for the preservation of Ambrose facilities, apparatus, and sample materials. When conducting work in the classroom or in the field, be observant of proper procedure and check that others around you are not at risk. Report any concerns or incidents immediately to your instructor.

## Attendance:

Class attendance is mandatory. Participation in-class activities is mandatory and/or if moved online, participation in Zoom class and related activities is mandatory (COVID concern - contact instructor). Marks/points lost through excused absence can be discussed with the instructor and suitable alternate arrangements made at the instructor's discretion.

## Grade Summary:

### Grading Schedule

Weekly Work	20%	downloaded by the student well ahead of each class meeting
Exit Slip	20%	
Mid-term written examination	20%	mix of short questions and practical possible
Fieldtutorial Journal assignment	20%	
Final written examination	<u>20%</u>	mix of short questions and practical possible, non-cumulative
Total: 100%		

Late assignments may be accepted at instructor's discretion -- if contact and arrangements are made, however the mark achieved may be reduced by 5%/day (up to 10%/day if no contact is attempted by the student prior to the due-date).

The available letters for course grades are as follows:

Grade	Numeric equivalent	Interpretation	Grade Points
A+	100	<b>Mastery:</b> Comprehensive understanding of subject matter	4.00
A	95		4.00
A-	90		3.70
B+	85	<b>Proficient:</b> Well-developed understanding of subject matter	3.30
B	81		3.00
B-	76		2.70
C+	71	<b>Basic:</b> Developing understanding of subject matter	2.30
C	67		2.00
C-	62		1.70
D+	59	<b>Minimal Pass:</b> Limited understanding of subject matter	1.30
D	55		1.00
F	up to 49%	<b>Failure:</b> Failure to meet course requirements	0.00

Because of the nature of the Alpha 4.00 system, there can be no uniform University-wide conversion scale. The relationship between raw scores (e.g., percentages) and the resultant letter grade will depend on the nature of the course and the instructor's assessment of the level of each class, compared to similar classes taught previously.

Please note that final grades will be available on student registration system. Printed grade sheets are not mailed/emailed out.

### Other:

General class materials and suggested resources are available online through the University Moodle site. Materials to be printed and required for class will be posted and announced at least a class before. For help on how to access these files please see the IT Help Desk.

Ambrose University Library has a wealth of connections to online materials/sites, please inquire about this resource.

## Ambrose University Academic Policies:

### Communication

All students have received an Ambrose e-mail account upon registration. It is the student's responsibility to check this account regularly as the Ambrose email system will be the professor's instrument for notifying students of important matters (cancelled class sessions, extensions, requested appointments, etc.) between class sessions. If students do not wish to use their Ambrose accounts, they will need to forward all messages from the Ambrose account to another personal account.

### Registration

During the **Registration Revision Period** students may enter a course without permission, change the designation of any class from credit to audit and /or voluntary withdraw from a course without financial or academic penalty or record. Courses should be added or dropped on the student portal by the deadline date; please consult the List of Important Dates. After that date, the original status remains and the student is responsible for related fees.

Students intending to withdraw from a course after the Registration Revision Period must apply to the Office of the Registrar by submitting a "Request to Withdraw from a Course" form or by sending an email to the Registrar's Office by the **Withdrawal Deadline**; please consult the List of Important Dates on the my.ambrose.edu website. Students will not receive a tuition refund for courses from which they withdraw after the Registration Revision period. A grade of "W" will appear on their transcript.

Students wishing to withdraw from a course, but who fail to do so by the applicable date, will receive the grade earned in accordance with the course syllabus. A student obliged to withdraw from a course after the Withdrawal Deadline because of health or other reasons may apply to the Registrar for special consideration.

### Exam Scheduling

Students, who find a conflict in their exam schedule must submit a Revised Examination Request form to the Registrar's Office by the deadline date; please consult the List of Important Dates. Requests will be considered for the following reasons only: 1) the scheduled final examination slot conflicts with another exam; 2) the student has three final exams within three consecutive exam time blocks; 3) the scheduled final exam slot conflicts with an exam at another institution; 4) extenuating circumstances. Travel is not considered a valid excuse for re-scheduling or missing a final exam.

### Electronic Etiquette

Students are expected to treat their instructor, guest speakers, and fellow students with respect. It is disruptive to the learning goals of a course or seminar and disrespectful to fellow students and the instructor to use electronics for purposes unrelated to the course during a class session. Turn off all cell phones and other electronic devices during class. Laptops should be used for class-related purposes only. Do not use iPods, MP3 players, or headphones. Do not text, read, or send personal emails, go on Facebook or other social networks, search the internet, or play computer games during class. Some professors will not allow the use of any electronic devices in class. The professor has the right to disallow the student

to use a laptop in future lectures and/or to ask a student to withdraw from the session if s/he does not comply with this policy. Repeat offenders will be directed to the Dean. If you are expecting communication due to an emergency, please speak with the professor before the class begins.

### Academic Policies

It is the responsibility of all students to become familiar with and adhere to academic policies as stated in the Academic Calendar. Personal information (information about an individual that may be used to identify that individual) may be required as part of taking this class. Any information collected will only be used and disclosed for the purpose for which the collection was intended. For further information contact the Privacy Compliance Officer at [privacy@ambrose.edu](mailto:privacy@ambrose.edu).

### Extensions

Although extensions to coursework in the semester are at the discretion of the instructor, students may not turn in coursework for evaluation after the last day of the scheduled final examination period unless they have received permission for a course Extension from the Registrar's Office. Requests for course extensions or alternative examination time must be submitted to the Registrar's Office by the deadline date; please consult the List of Important Dates. Course extensions are only granted for serious issues that arise "due to circumstances beyond the student's control."

### Appeal of Grade

An appeal for change of grade on any course work must be made to the course instructor within one week of receiving notification of the grade. An appeal for change of final grade must be submitted to the Registrar's Office in writing and providing the basis for appeal within 30 days of receiving notification of the final grade, providing the basis for appeal. A review fee of \$50.00 must accompany the appeal. If the appeal is sustained, the fee will be refunded.

### Academic Integrity

We are committed to fostering personal integrity and will not overlook breaches of integrity such as plagiarism and cheating. Academic dishonesty is taken seriously at Ambrose University as it undermines our academic standards and affects the integrity of each member of our learning community. Any attempt to obtain credit for academic work through fraudulent, deceptive, or dishonest means is academic dishonesty. Plagiarism involves presenting someone else's ideas, words, or work as one's own. Plagiarism is fraud and theft, but plagiarism can also occur by accident when a student fails or forgets to acknowledge to another person's ideas or words. Plagiarism and cheating can result in a failing grade for an assignment, for the course, or immediate dismissal from the university. Students are expected to be familiar with the policies in the current Academic Calendar that deal with plagiarism, cheating, and the penalties and procedures for dealing with these matters. All cases of academic dishonesty are reported to the Academic Dean and become part of the student's permanent record.

## **Mental Health Support**

All of us need a support system. We encourage students to build mental health supports and to reach out when help is needed.

### On Campus:

- Counselling Services: [ambrose.edu/counselling](http://ambrose.edu/counselling)
- Peer Supportive Listening: One-to-one support in Student Life office. Hours posted at [ambrose.edu/wellness](http://ambrose.edu/wellness).
- For immediate crisis support, there are staff on campus who are trained in Suicide Intervention and Mental Health First Aid. See [ambrose.edu/crisissupport](http://ambrose.edu/crisissupport) for a list of staff members.

### Off Campus:

- Distress Centre - 403-266-4357
- Sheldon Chumir Health Care Centre - 403-955-6200
- Emergency - 911

## **Sexual Violence Support**

All staff, faculty, and Residence student leaders have received *Sexual Violence Response to Disclosure* training. We will support you and help you find the resources you need. There is a website with on and off campus supports – [ambrose.edu/sexual-violence-response-and-awareness](http://ambrose.edu/sexual-violence-response-and-awareness).

### Off Campus:

- Clinic: Sheldon Chumir Health Centre - 403-955-6200
- Calgary Communities Against Sexual Abuse - 403-237-5888

**Note:** Students are strongly advised to retain this syllabus for their records.